FIG. 1

1.02
CUSTOMER SENDS
MESSAGE IMPORT FILE

1.04
DCVMS FINDS
FIRST/NEXT MESSAGE
HEADER

1.06
VALID
MESSAGE
HEADER   NO

YES

1.08
VALID
RECIEPT.
INFO.   NO

YES

1.10
PARSE MESSAGE IMPORT
FILE, SENDING DATA WITHIN
FILE TO DATABASE 1, 2, OR 3
FOR STORAGE AS RECORDS

DATABASE 1

DATABASE 2

DATABASE 3

STORE AND ALLOCATE
DATA FOR MESSAGE
RETRIEVAL

STORE AND ALLOCATE
DATA FOR MESSAGE
RETRIEVAL

1.12
STORE AND ALLOCATE
DATA FOR MESSAGE
RETRIEVAL

CONVERT RECORDS
INTO AUDIO RECORD
READY FOR MESSAGE
RETRIEVAL

CONVERT RECORDS
INTO AUDIO RECORD
READY FOR MESSAGE
RETRIEVAL

1.14
CONVERT RECORDS
INTO AUDIO RECORD
READY FOR MESSAGE
RETRIEVAL

STORED AUDIO
RECORD IN
DATABASE 1

STORED AUDIO
RECORD IN
DATABASE 2

1.16
STORED AUDIO
RECORD IN
DATABASE 3

FIG. 1

FIG. 2

USER | DCVMS

USER KEYS IN
USER I.D. AND PASSWORD   2.02

DCVMS SEARCHES
DATABASE 1 FOR
UNREAD MESSAGES   2.04

DATABASE 1
RECORD
LOCATED   2.06
— NO → NO RECORDS.
END CALL

YES

DCVMS READS AUDIO
RECORD TO USER   2.08

USER REQUESTS TO
RETRIEVE UNHEARD
MESSAGES   2.10

DCVMS OPENS DATABASE 2
SEARCHING ALL RECORDS CONTAINING
USER'S I.D.   2.12

DCVMS PRIORITIZES AND SORTS
ALL USER'S RECORDS FOR MESSAGE
RETRIEVAL.   2.14

DCVMS READS AUDIO RECORDS TO
USER, PROMPTING USER TO TAKE
ACTION.   2.16

USER TAKES ACTION BY
SELECTING ONE OF SEVERAL
ACTION MESSAGES   2.18

DCVMS OPENS DATABASE 3
AND PERFORMS THE REQUIRED
ACTION.   2.20

ALL
MESSAGES
HEARD &
PROCESSED   2.22
— No →

YES

END RETRIEVAL   FIG. 2

FIG. 3

USER
200

180

DYNAMICALLY CONFIGURED
VOICE MAIL SYSTEM

140

DATABASE 1   DATABASE 2   DATABASE 3

CUSTOMER
100
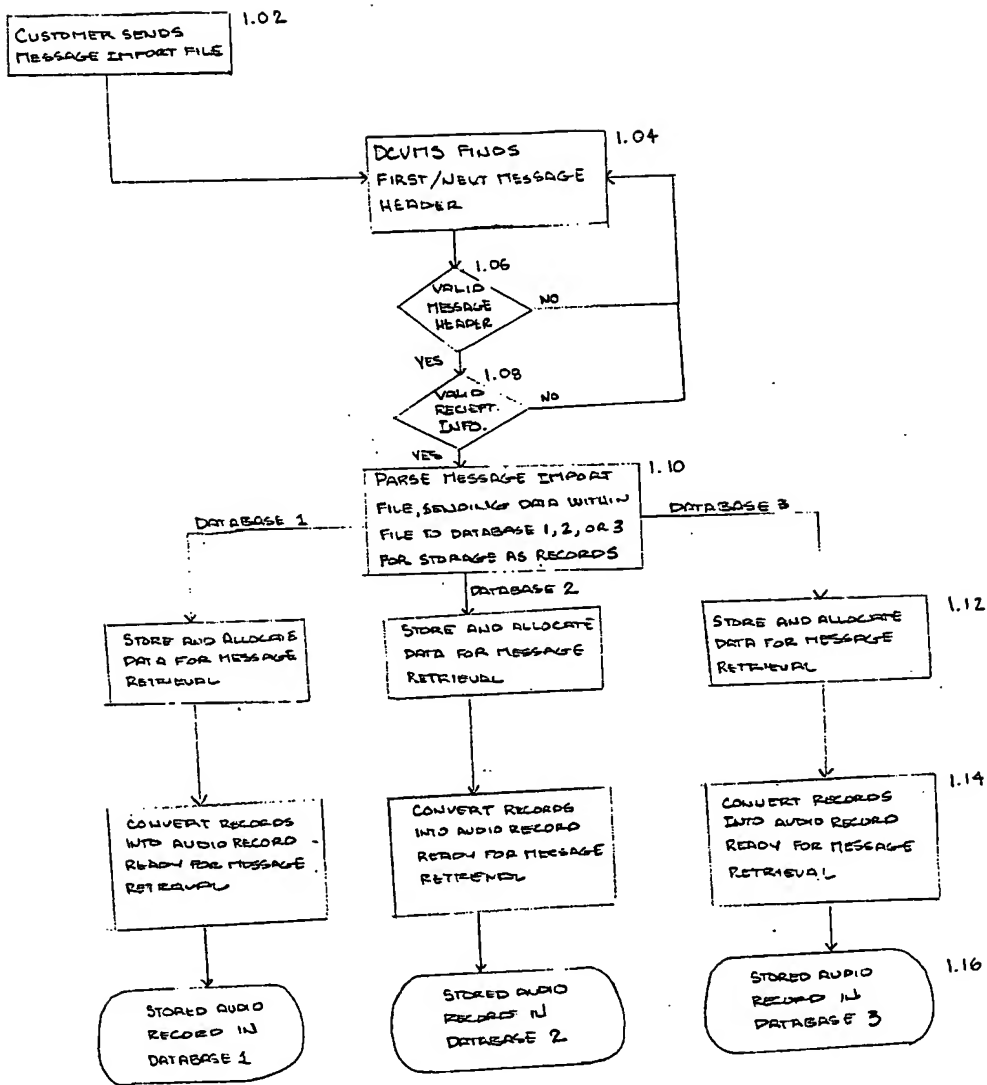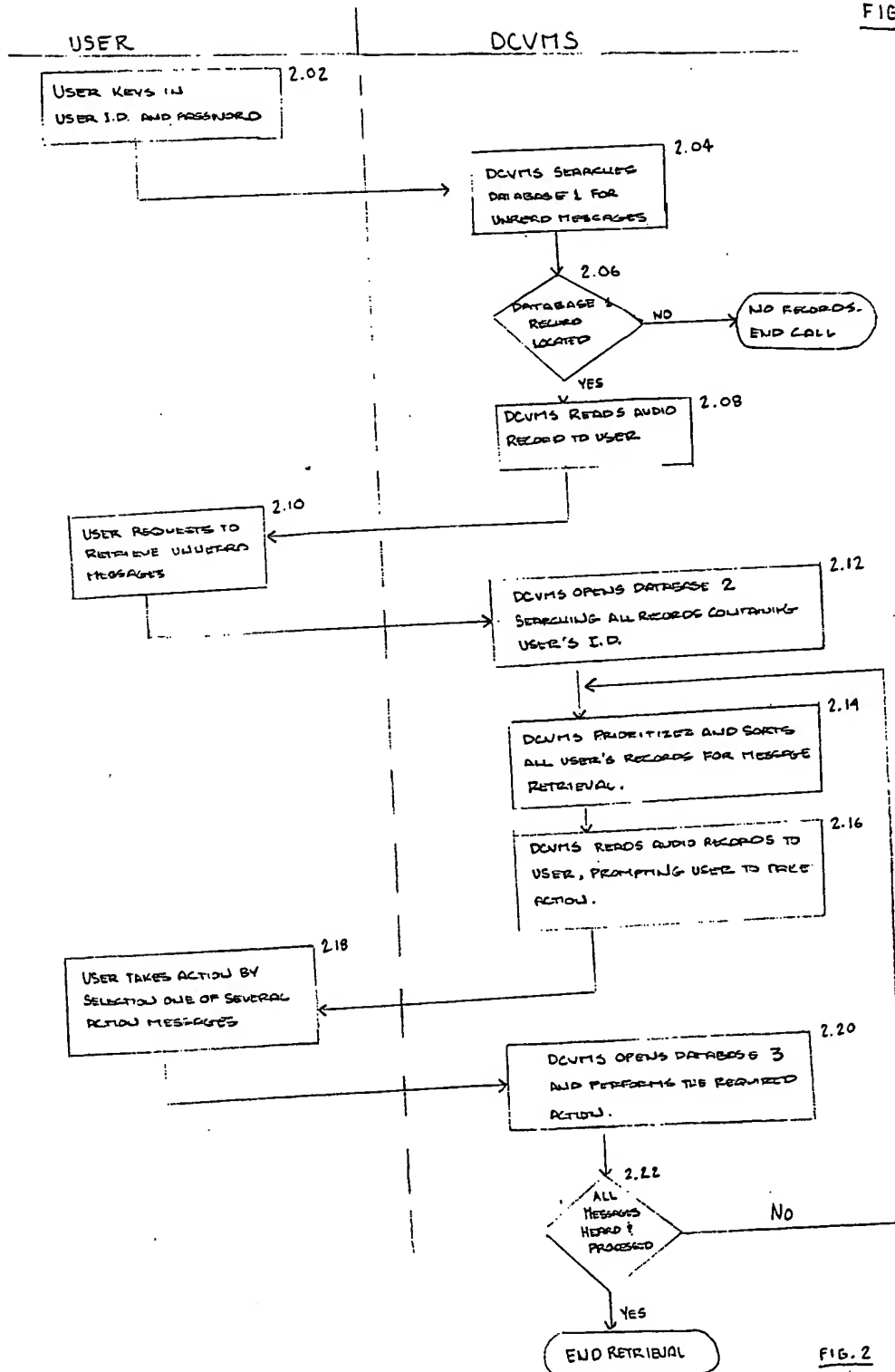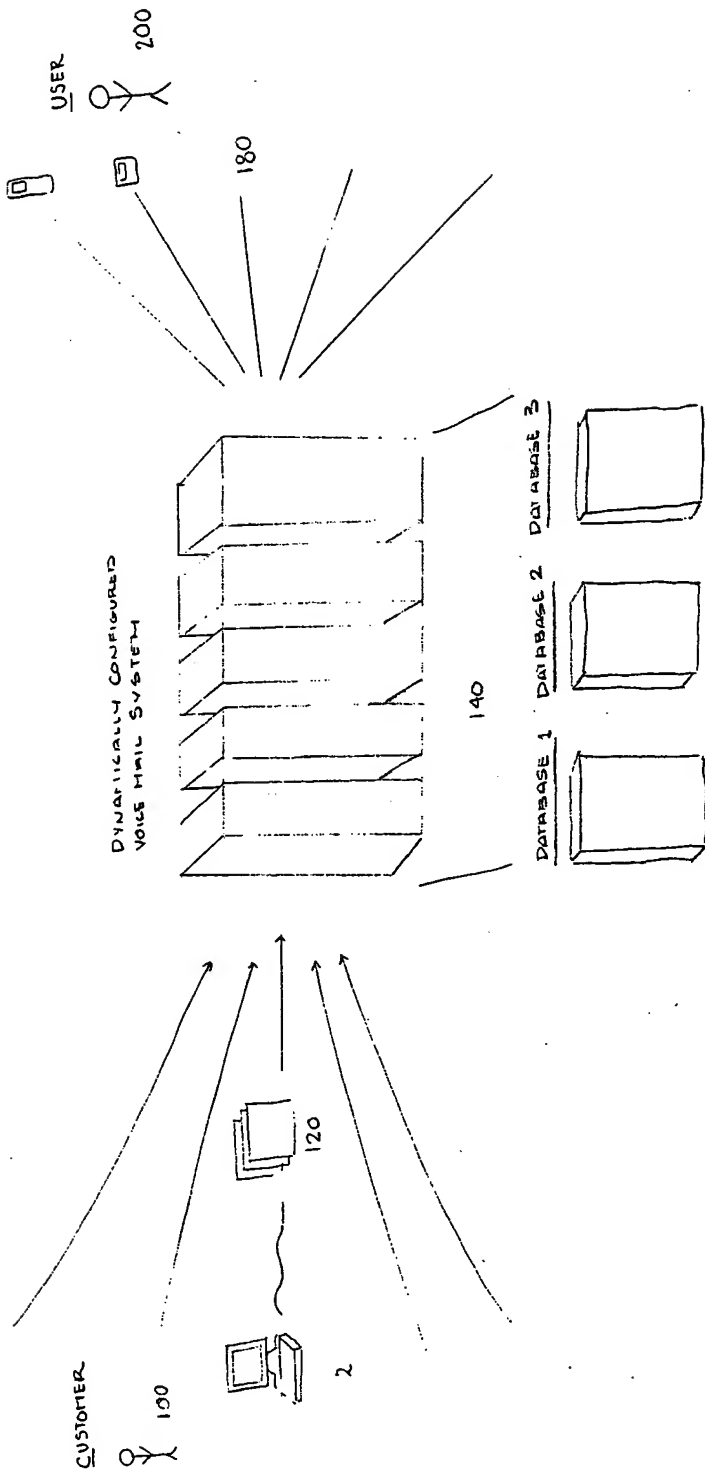
120

2

Database 1 will contain the mailbox users information. This database tells DCVMS if a user has any messages to listen to and if so this database also contains the unique user id number that DCVMS will utilize throughout the rest of the processing so that the user can listen to messages and take actions as indicated.

Database 1

Record Identifier	In-Box Name	In-Box User ID	In-Box Date
100	Ryan Johnson	User ID 45832	01.15.2004

FIG. 4

Database 3 will tell DCVMS what action to take when a user is listening to a message and presses a key on the phone keypad.

Database 3

Record Identifier	User ID	Action lookup key	Process 1	Process 2	Address for Process
1011	45832	A1	Play		
1011	45832	A2	Delete		
1011	45832	B1	Play		
1011	45832	B2	Forward	Delete	assistant@baylor.edu
1011	45832	B3	Delete		
1011	45832	C1	Play		
1011	45832	C2	Call		2543664300
1011	45832	C3	Delete		
1022	45832	A1A	Call		5125551256
1022	45832	A2A	Delete		
1022	45832	A1B	Call		5125555899
1022	45832	A2B	Delete		
1022	45832	B1A	email		566manager@store.com
1022	45832	B2A	Delete		
1022	45832	B1B	email		312manager@store.com
1022	45832	B2B	Delete		
1022	45832	C1A	Delete		

FIG. 6

FIG. 5

Database 2 will detail the hierarchy of the message tree and order that the messages are to be presented to the user. Database 2 will also contain the data or text that will be converted to speech:

Database 2

Record Identifier	User ID		Options Tree	Order er	Options Tree Message	Action 1 (keypad #1)	Action 1 Message	Action 2 (keypad #2)	Action 2 Message	Action 3 (keypad #3)	Action 3 Messages
101	4583	2	A	1	You have 2 stores that have a cash shortage	A1	Press 1 to hear cash shortage messages	A2	Press 2 to delete cash shortage messages		
101	4583	2	B	1	You have 2 store that are behind plan	B1	Press 1 to hear messages of stores behind plan	B2	Press 2 to forward these messages to your assistant and delete messages from your Inbox	B3	Press 3 to delete store plan messages
101	4583	2	C	1	You have 3 meetings scheduled on your calendar	C1	Press 1 to hear calendar	C2	Press 2 to call your assistant	C3	Press 3 to delete calendar messages
102	4583	2	A1	1	Store 309 has a cash shortage of $156	A1A	Press 1 to call the store manager	A2A	Press 2 to delete this message		
102	4583	2	A1	2	Store 311 has a cash shortage of $87	A1B	Press 1 to call the store manager	A2B	Press 2 to delete this message		
102	4583	2	B1	1	Store 566 is 17% behind plan	B1A	Press 1 to escalate to the store manager	B2A	Press 2 to delete this message		
102	4583	2	B1	2	Store 312 is 3% behind plan	B1B	Press 1 to escalate to the store manager	B2B	Press 2 to delete this message		
102	4583	2	C1	1	You have a 12:00 meeting with your boss at 12:00. You have a 1:00 meeting with David Henry in the Blue Conference Room. You have a 3:00 meeting with a friend	C1A	Press 1 to delete this message				

Fig. 5